

Amendments to the claims:

Please replace all prior versions and listings of the claims with the following amended claims:

CLAIMS

What is claimed is:

- 1 1. (Currently Amended) A composite material ~~polymer system~~ comprising  
2 amide linkages with hetero-atoms positioned beta relative to nitrogen atoms forming the  
3 amide linkages.
- 1 2. (Currently Amended) The composite material ~~polymer system~~ of claim 1, wherein the  
2 amide linkages link one or more of aromatic structures and heterocyclic structures.
- 1 3. (Currently Amended) The composite material ~~polymer system~~ of claim 2, wherein the  
2 hetero-atoms are nitrogen.
- 1 4. (Currently Amended) The composite material ~~polymer system~~ of claim 2, wherein the  
2 heterocyclic structures comprise an alcohol functional group that is positioned beta to at  
3 least a portion of the amide linkages.
- 1 5. (Currently Amended) The composite material ~~polymer system~~ of claim 2, wherein the  
2 aromatic structures comprise one or more function groups positioned beta relative to at  
3 least a portion of the amide linkages, the one or more functional group being selected  
4 from a group consisting of an alcohol functional group, a thiol functional group and an  
5 amine functional group.
- 1 6. (Currently Amended) The composite material ~~polymer system~~ of claim 2, wherein  
2 aromatic structures include bicyclic sub-structures.
- 1 7. (Currently Amended) The composite material ~~polymer system~~ of claim 1, further  
2 comprising a binder material.

- 1      8.      (Currently Amended) The composite material ~~polymer system~~ of claim 7, wherein the  
2      binder material comprises one or more materials selected from a group consisting of  
3      epoxy, rubber, plastic, polyurethane and silicone.
- 4      9.      (Currently Amended) The composite material ~~polymer system~~ of claim 2, wherein the  
5      amide linkages are positioned para between the aromatic structures and the heterocyclic  
6      structures.
- 7      10.     (Withdrawn) A polymer comprising amide linkages between aromatic structures and  
8      heterocyclic structures, wherein the heterocyclic structures comprise hetero-atoms  
9      positioned beta relative to a nitrogen of the amide linkages.
- 1      11.     (Withdrawn) The polymer of claim 10, further comprising alcohol groups positioned para  
2      to the amide linkages on at least one of the aromatic structures and heterocyclic  
3      structures.
- 1      12.     (Withdrawn) The polymer of claim 10, wherein hetero-atoms include nitrogen atoms.
- 1      13.     (Withdrawn) The polymer of claim 12, wherein the nitrogen atoms are positioned beta  
2      relative the nitrogen of the amide linkages.
- 1      14.     (Withdrawn) The polymer of claim 10, wherein the aromatic structures and the  
2      heterocyclic structures are linked in a para configuration between the amide linkages.
- 1      15.     (Withdrawn) The polymer of claim 10, further comprising hydroxyl groups.
- 1      16.     (Withdrawn) The polymer of claim 15, wherein the hydroxyl groups are positioned beta  
2      with respect to the amide linkages on at least one of the aromatic structures and the  
3      heterocyclic structures.
- 1      17.     (Currently Amended) A method for making a polymer composite material ~~system~~  
2      comprising:

- 3           a)     reacting a carboxylic acid precursor and an amine precursor in a suitable solvent  
4                   to form an aromatic polyamide, wherein the carboxylic acid precursor comprises  
5                   an aromatic structure and two reactive carboxylic acid groups and the amine  
6                   precursor comprises a heterocyclic structure and two reactive amine groups and  
7                   wherein the heterocyclic structure comprises a hetero-atom in a beta position  
8                   relative to one or more of the reactive amine groups; and  
9           b)     isolating the aromatic polyamide.

i     18.    (Original) The method of claim 17, wherein the hetero-atom is a nitrogen.

1     19.    (Original) The method of claim 17, wherein the aromatic carboxylic acid precursor  
2                   comprises a functional group positioned beta to one or more the reactive carboxylic acid  
3                   groups, wherein the one or more functional groups are selected from a group consisting  
4                   of an alcohol functional group, a thiol functional group and an amine functional group.

1     20.    (Original) The method of claim 17, wherein the heterocyclic amine precursor comprises a  
2                   functional group positioned beta to the one or more of the reactive amine groups, wherein  
3                   the functional group is selected from a group consisting of an alcohol functional group, a  
4                   thiol functional group and an amine functional group.

1     21.    (Original) The method of claim 17, wherein the two reactive carboxylic acid groups are  
2                   positioned para to each other on the aromatic structure.

1     22.    (Original) The method of claim 17, wherein the reactive amine groups are positioned para  
2                   relative to each other on the heterocyclic structure.

1     23.    (Original) The method of claim 17, further comprising incorporating the aromatic  
2                   polyamide in a binder material.

1     24.    (Original) The method of claim 23, wherein the binder material is selected from a group  
2                   consisting of epoxy, rubber, plastic, polyurethane and silicone.

- 1     25.     (Original) The method of claim 17, further comprising integrating the aromatic  
2               polyamide into a fabric material.
- 1     26.     (Withdrawn) A method of making an aromatic polyamide comprising:  
2               a)       combining a first precursor with a second precursor to form the aromatic  
3                       polyamide, wherein the first precursor comprises two reactive carboxylic acid  
4                       groups bonded to an aromatic structure and the second precursor comprises two  
5                       reactive amine groups bonded to a heterocyclic structure; and  
6               b)       isolating the aromatic polyamide.
- 1     27.     (Withdrawn) The method of claim 26, further comprising combining a third precursor  
2               with the first precursor and the second precursor, wherein the third precursor comprises  
3               two reactive carboxylic acid groups bonded to an aromatic structure that is different from  
4               the aromatic structure of first precursor.
- 1     28.     (Withdrawn) The method of claim 26, further comprising combining a third precursor  
2               with the first precursor and the second precursor, wherein the third precursor comprises  
3               two reactive amine groups bonded to a heterocyclic structure that is different from the  
4               heterocyclic structure of the second precursor.
- 1     29.     (Withdrawn) The method of claim 26, wherein the heterocyclic structure of the second  
2               precursor comprises a nitrogen atom positioned beta to at least one of the reactive amine  
3               groups.
- 1     30.     (Withdrawn) The method of claim 29, wherein the heterocyclic structure of the second  
2               precursor comprises an alcohol functional group.
- 1     31.     (Withdrawn) The method of claim 30, wherein the alcohol functional group is positioned  
2               beta to at least one of the reactive amine groups.
- 1     32.     (Withdrawn) The method of claim 26, wherein the aromatic structure comprises an  
2               alcohol functional group.

- 1      33.    (Withdrawn) The method of claim 32, wherein the alcohol functional group is positioned  
2            beta to at least one of the reactive carboxylic acid groups.